## Work Order ID 124382

September-11-14 12:04:02 PM

\*124382\*

Page 1

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Revision ID:	D3417-5 Washer		Accept	*N900	*N900040100*				Start Stop		S1*	
	9/10/14 <b>Start Qty:</b> 24.00	/ -		Cust Item 1 Customer:				Stop	*N	S2*		
Approvals:	Process Plan: Mしつ QC:	Date: _\U-∞\- \	Tooling: SPC (Y/N):	Date:					Start Stop		R1* R2*	
Sequence ID/ Work Center II			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Reje Qty		Reject Number	Insp. Stamp	
Draw Nbr	Revision Nbr											
D3417	Rev F											
*100  *100*  Doosan  Doosan Lathe	Hardinge CNC LATHE  Memo 1-Turn as n	E SMALL per Folio FA761	0.00				24		5		DAS 40 9-89	
	Rev: 🛕 Rev. A Dwg D341 2-Deburr	& 7 Rev: _ F_									11/10/10	
110	QC2- Inspect parts off	machine FAI/FAIB	0.00								DAS	
*11 N* QC Quality Control	Memo		0.00				24		<u> </u>		40 9-89 14/10/10	
120 *120*	QC8- Inspect parts - sec	cond check	0.00				a./	ر	,	,	DAS 37 9-89	
QC Ouality Control	Memo		0.00				24	_ Ø		·	14.1	

DQA:			Date:							DD 4 TE				
QA Closed:			Date:			WORK ORDER NON-	-C(	JNFOI	RMANCE / UI		ork Order up	odate only	AEROSP	PACE
\\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		1.21				DISPOSITION				AGAINST DE	PARTMENT,	PROCESS		
Work Orde	er: .					Downerly [	1		Skid-tube	Crosstube	]	Water Jet	Engineering	
Part N	No.					Rework Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
	•					Use-as-is		Į.	noforming	Finishing		e/Packaging	Other	
NCR No.				<del></del>	Suspected Unapproved	<b>⊣ i</b> ~⊨−			Composite	- <del>  -  </del>				
Root					Desc	ription of work order update		Initial	Act	ion	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspect	tor
Design														
Doc/Data														
Equip/Tooling														
Handling/Pre														
Material														
Operator			ł			* .	l							
Offset/Setup	Ш													
Process	$oxed{oxed}$	i					l							
Supplier														
Training														
Transport														
Unapproved							<u> </u>							
							FA	ULT CA	regory				-	
Landi	ng (	Gear				General					-	<b>-</b>		
	L	Bending			L	Bend	L	Folio/F	rogram		Outside Dim	<b>-</b>	Pressure/Force	d
•	L	Centre N	ot Concer	ntric		BOM/Route		Grain	•		Over/Under	tolerance	Set-up	
		Cracks				Broken/Damage/Defect		Hardwa	ire		Part Incorre	cí L	Temperature/C	ure
	L	Crimp/Ki	nk/Ripple	/Wave		Burrs	L.	Inspect	ion Incomplete/Ur	nqualified	Part Lost/Mi	ssing	Weld	
		Cuffs				Contamination		Instruct	ions Incomplete/l	Unclear	Part Moved	L	Wrong Stock Pu	ılled
		Crushing				Countersink	L	Misali	ned/off center	_	Positioned V	Vrong	_	
		Heat Trea	at			Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other	
]		Inspectio	n Strip in	Tube		Drawing		Misrea	d				,	***
		Marks/Cl	hatter			Drill Holes		Off-set						
		Turning 9	Sequence			Finish		Out of	Calibration					
		Wave/Tv	vist in Tul	oe		Fit/Function		Out of	Sequence					

Work Order ID 124382
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\*124382\* September-11-14 12:04:02 PM Item ID: D3417-5 Accept \*N900040100\* Setup Start **Revision ID:** Stop **Item Name:** Washer **Start Date:** 9/10/14 **Start Qty: 24.00** \*24\* **Cust Item ID:** Required Date: 9/10/14 Req'd Oty: 24.00 \*94\* **Customer:** Reference: Run Start **Approvals: Process Plan:** Date: **Tooling:** Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Tool ID Tool # Set Up/ Plan Reject Accept Reject Insp. **Work Center ID** Description **Run Hours** Code Qty Qty Number Stamp Identify as per dwg & Stock Location: \$\forall 0\forall \text{S} 130 \*130\* Packaging 0.00 Memo Packaging 140 QC21- Final Inspection - Work Order Release 0.00 \*140\* QC 0.00 Memo **Quality Control** 

DQA:			Date:											TRAC
QA Closed:			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UI		ork Order up	odate only		AEROSPACE
147 - al - O a d						DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	•	
Work Orde	er: -					Rework	ıİ		Skid-tube	Crosstube	٦	Water Jet		Engineering
Part N	۱o.					Scrap			Machining Machining	Small Fab	Pro	d. Eng. Coor.		Quality
					Use-as-is		noforming	re/Packaging	П	Other				
NCR N	۱o.					Suspected Unapproved			Large Fab	Composite	]	Supplier		
Root					Desc	ription of work order update	П	Initial	Act	ion	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption	Date	Verificatio	n	QC Inspector
Design														
Doc/Data							İ							
Equip/Tooling														
Handling/Pre														
Material														
Operator														
Offset/Setup														
Process	Ш													
Supplier														
Training														
Transport	Ш													
Unapproved						<u> </u>	<u> </u>		<u> </u>	-				
							FA	ULT CA	<b>TEGORY</b>					
Landi		1				General	_	1 /-	_	_	7			l- (- )
		Bending			-	Bend	-	-1	Program	-	Outside Dim		-	Pressure/Forced
	Щ	Centre No	ot Concer	ntric	-	BOM/Route	$\vdash$	Grain		-	Over/Under			Set-up
		Cracks		<b>.</b>	_	Broken/Damage/Defect	<u> </u>	Hardwa		<u> </u>	Part Incorre			Temperature/Cure
		Crimp/Kii	nk/Ripple	/Wave		Burrs	-	<b>⊣</b> '	ion Incomplete/Ur	· —	Part Lost/Mi	_	⊢	Weld
		Cuffs			<u> </u>	Contamination	-	-	tions Incomplete/U	Inclear	Part Moved			Wrong Stock Pulled
		Crushing			<u> </u>	Countersink	-	- 4	gned/off center	 	Positioned V	~		O45
	$\vdash$	Heat Trea		<b>-</b> 1	<u> </u>	Cut Too Short	$\vdash$	Mislabe		L	Power Loss/	Surge		Other
	<u> </u>	Inspectio		fube	-	Drawing	$\vdash$	Misrea						
		Marks/Cl			<u> </u>	Drill Holes	$\vdash$	Off-set						
	<u> </u>	Turning S			<u> </u>	Finish	_	4	Calibration					
		Wave/Tw	vist in Tub	be		Fit/Function	1	Out of	Sequence					

**Picklist Print** 

September-11-14 12:04:02 PM

Work Order ID: 124382

\*124382\*

Parent Item:

D3417-5

\*D3417-5\*

Parent Item Name: Washer

**Start Date:** 9/10/14

Required Date: 9/10/14

Page 1

**Start Qty: 24.00** 

Required Qty: 24.00

**Comments:** 

IPP Rev:ANew issue08-07-09 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item		Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR1.2500		Purchased	No			110	f	19.0950	0.0296	0.74779			-
*MDFI RII DELRIN ROUND BAR 1.2		<b>)</b> 0*							**		14/	10/10	DAS
				Location		Loc (	<u>Oty</u>	Loc Code					9-89
				MAT018		19	.095				e;		
				<del>⊷√</del> mi	128113	19	.095			1.1	,		

DQA:			Date:			WORK ORDER MON	~		SAAANGE / LI					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	DART
QA Closed:			Date:			WORK ORDER NON-	-((	JNFOI	RIVIAINCE / UI		Nork Orde	er up	date only	7	AEROSPACE
						DISPOSITION				AGAINST [	DEPARTM	ENT/	PROCESS		
Work Orde	er: .					0			ا ماریم ایداری	Crosstubal	_		Water Jet	7 500	gineering
Dart N	ما					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	-	Drod	I. Eng. Coor.	- = = = = = = = = = = = = = = = = = = =	Quality
Part N	۷U					Use-as-is			noforming	Finishing	Rec		e/Packaging	┪	Other
NCR N	lo.					Suspected Unapproved			Large Fab	Composite	<b>–</b>	3(0)	Supplier	1	
	•					Suspected Onapproved									
Root					Desc	ription of work order update	ı	nitial	Act	ion	Sign	&			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption	Date	e	Verification	<u> </u>	C Inspector
Design															
Doc/Data															
Equip/Tooling															
Handling/Pre														1	
Material															
Operator															
Offset/Setup															
Process															
Supplier					İ										
Training						•	l								
Transport							1								
Unapproved															
							FA	ULT CAT	regory	,					
Landi	ng (	Gear				General		•		-	_			_	
	_	Bending				Bend		Folio/F	rogram		Outside	Dime	ensions	Press	ure/Forced
		Centre No	ot Concer	ntric		BOM/Route	L	Grain			Over/U	nder t	tolerance	_Set-ι	•
		Cracks				Broken/Damage/Defect		Hardwa	ire		Part Inc	orrec	<sup>ن</sup>	Temp	erature/Cure
		Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Ur	nqualified	Part Los	t/Mis	ssing	Weld	
		Cuffs				Contamination		Instruct	ions Incomplete/U	Jnclear	Part Mo	ved	L	Wron	ig Stock Pulled
		Crushing				Countersink	$\bot$	Misalig	ned/off center	Ĺ	Position	ied W	rong _	_	
		Heat Trea	at			Cut Too Short		Mislabe	eled	Ĺ	Power l	.oss/S	Gurge	Othe	r
		Inspectio	n Strip in	Tube		Drawing		Misread	Ė		-				
		Marks/Ch	natter			Drill Holes		Off-set							
		Turning S	equence			Finish		Out of	Calibration						
		Wave/Tw	ist in Tub	oe	$\Box \Box$	Fit/Function		Out of	Sequence						

DART AEROSPACE LTD	Work Order:	124382
Description: Washer	Part Number:	D3417-5
Inspection Dwg: D3417 Rev: F		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

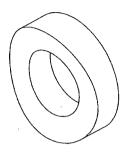
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø1.125	+0.030/-0.000	1,145			VERN	PHD-12
Ø0.641	+0.008/-0.001	. 643			PIN G	
0.120	+0.010/-0.000	. 127			Mic	PHO-02 PHO-12
0.810	+0.010/-0.000	. 815			VERN	PHO-12
0.251	+/-0.010	. 251			11	
R2.00	+/-0.030	2,00			Rad G	
	·					
				-		

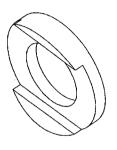
 DAS
 DAS

 Measured by:
 40/9-89
 Audited by:
 37/9-89
 Preliminary Approval:

 Date:
 (4/6)/10
 Date:
 (4/10.70)
 Date:

Date	Change	Revised by	Approved_
.05.04	New Issue	KJ/DD	
.11.12	Dwg Rev updated	KJ .o.	
.07.31	Dwg Rev updated	KJ 🙀	(/1//
)	.11.12	.05.04 New Issue .11.12 Dwg Rev updated	.05.04 New Issue KJ/DD .11.12 Dwg Rev updated KJ







**D3417-1 WASHER** 

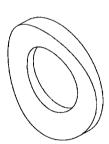
**D3417-3 WASHER** 

**D3417-5 WASHER** 

**D3417-7 WASHER** 

SHOP CORY RETURN TO **ENGINEERING UNCONTROLLED COPY** SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER MUS

14-09-17



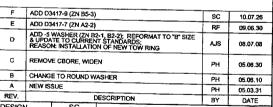
В

D

NOTES:
1) MATERIAL: BLACK DELRIN II 150E OR ACETRON GP ACETAL, ROD
REF DART SPEC M-DELRIN-R
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, BAR
REF DART SPEC M-DELRIN-B
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, SHEET
REF DART SPEC M-DELRIN-S
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: D3417-1, 0.020 lbs
D3417-5, 0.010 lbs

D3417-5, 0.010 lbs D3417-7, 0.010 lbs D3417-9, 0.004 lbs

**D3417-9 WASHER** 



DESIGN SC DART AEROSPACE LTD DRAWN HAWKESBURY, ONTARIO, CANADA CHECKED DRAWING NO. MFG. APPR. D3417 SHEET 1 OF 3 APPROVED TITLE SCALE DE APPR. WASHER NTS DATE 10.07.26

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